

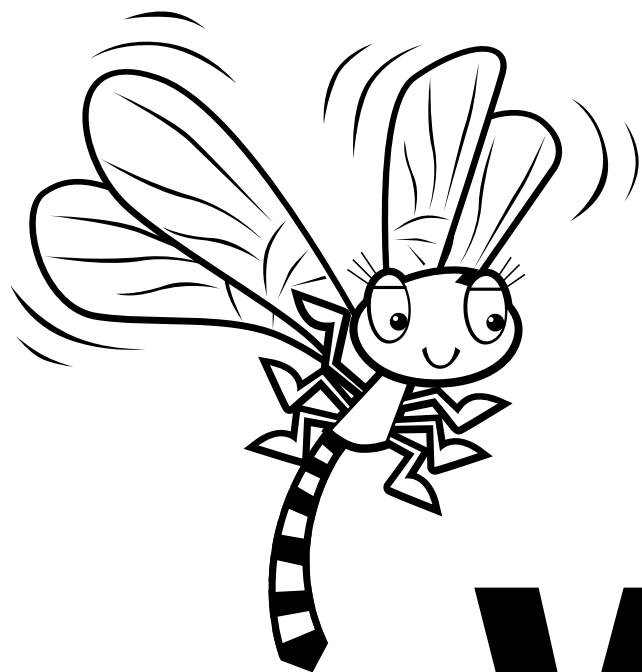


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TEACHERS & GROUP LEADERS

GUIDE & SAFETY NOTES





WELCOME

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What is Canal Quest?

Canal Quest is a series of activities for 7-11 year olds to do on a stretch of canal.

These activities can help you to deliver the National Curriculum and help your pupils to explore the wildlife, heritage and landscape of a canal.

If you want to deliver particular topics in the National Curriculum, read the National Curriculum Links on pages 2-8.

If you want to theme your canal visit around a particular aspect of the canal, read the following pupil workbook guide.

What's in the 7 pupil workbooks?

Each pupil workbook is based on a theme:

1. **Let's make a map** – producing a base map of your stretch of canal, showing all its main features.
2. **Beaks & feathers** – identifying and observing the behaviour of birds on and around canals.
3. **What's in the hedge** – looking at what grows in canal hedges, their history and how they are looked after today.
4. **What's living in the walls** – studying mini-beasts and plants that grow on and in built structures on the canal.
5. **Canal sights, sounds & smells** – using your senses to experience the canal landscape and exploring pupils' opinions about it.
6. **Building materials & methods** – investigating the materials and building methods that were used to construct bridges, walls and buildings on the canal.
7. **People & canals** – finding out what people are doing on the canal and what their opinions are about the canal.

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What are the 6 identification posters for?

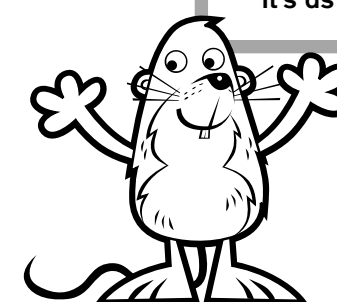
They help pupils identify things they will study in the pupil workbooks (there is no identification poster for Canal Sights, Sounds & Smells).

What's in this Teachers and group leaders' guide?

- National Curriculum Links
- Notes on each pupil workbook:
 - Brief introduction to subject matter
 - Learning objectives and outcomes
 - Suggested things to do before you visit the canal
 - Ideas for possible follow-up activities
- Safety! guide
- Contact details for British Waterways' offices

How do we do Canal Quest?

1. Read this Teachers and group leaders' guide.
2. Pick a stretch of canal to visit.
3. Contact your nearest waterway office to inform them of your plans.
4. Choose the pupil workbooks most relevant to your needs.
5. Check the Safety! guide before you visit the canal.



It's as simple as that! Have fun!

National Curriculum Links

How the seven pupil workbooks fit in to Key Stage 2.

ENGLISH

Canal Quest pupil workbook

En1 Speaking and listening 1 To speak with confidence in a range of contexts, adapting their speech for a range of purposes and audiences b gain and maintain the interest and response of different audiences e speak audibly and clearly, using spoken standard English in formal contexts	7 People & canals 7 People & canals
2 To listen, understand and respond appropriately to others a identify the gist of an account or key points in a discussion and evaluate what they hear b ask relevant questions to clarify, extend and follow up ideas e respond to others appropriately, taking into account what they say	7 People & canals 7 People & canals 7 People & canals
3 Group discussion and interaction a make contributions relevant to the topic and take turns in discussion	3 What's in the hedge 5 Canal sights, sounds & smells 7 People & canals
En2 Reading 3 Reading for information 4 Non-fiction and non-literary texts	General reading skills appropriate to this key stage, plus: The whole range of skills in this section – when looking in secondary sources for information a identify the use and effect of specialist vocabulary
En3 Writing	General writing skills appropriate to this key stage, necessary for filling out the pupil workbooks. All pupil workbooks

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MATHEMATICS

Canal Quest pupil workbook

Ma3 Shape, space and measures 1 Using and applying shape, space and measures 2 Understanding properties of shape	a recognise the need for standard units of measurement c make and draw with increasing accuracy 2-D and 3-D shapes and patterns	1 Let's make a map 2 Beaks & feathers 6 Building materials & methods
4 Understanding measures	a recognise the need for standard units of length, mass and capacity, choose which ones are suitable for a task, and use them to make sensible estimates in everyday situations b recognise that measurement is approximate; choose and use suitable measuring instruments for a task; interpret numbers and read scales with increasing accuracy; record measurements using decimal notation	1 Let's make a map 1 Let's make a map
Ma4 Handling data 2 Processing, representing and interpreting data	c represent and interpret discrete data using graphs and diagrams, including pictograms, bar charts and line graphs	7 People & canals – possible follow up activity
Breadth of study	b approximating and estimating more systematically in their work in mathematics d applying their measuring skills in a range of contexts	3 What's in the hedge 1 Let's make a map

SCIENCE

Canal Quest pupil workbook

Sc2 Life processes and living things 1 Life processes	a that the life processes common to humans and other animals include nutrition, movement, growth and reproduction b that the life processes common to plants include growth, nutrition and reproduction c to make links between life processes in familiar animals and plants and the environments in which they are found.	2 Beaks & feathers 4 What's living in the walls 4 What's living in the walls 2 Beaks & feathers 3 What's in the hedge 4 What's living in the walls
4 Variation and classification	a to make and use keys b how locally occurring animals and plants can be identified and assigned to groups c that the variety of plants and animals makes it important to identify them and assign them to groups	4 What's living in the walls 2 Beaks & feathers 3 What's in the hedge 4 What's living in the walls 2 Beaks & feathers 3 What's in the hedge 4 What's living in the walls

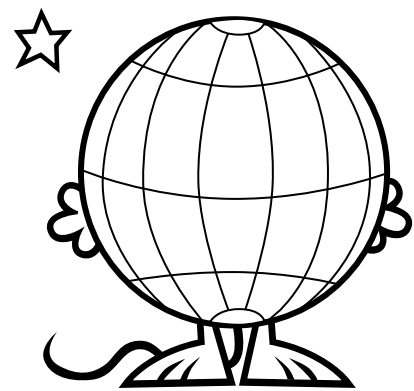


SCIENCE CONTINUED

Canal Quest pupil workbook

5 Living things in their environment Adaptation Feeding relationships	b about the different plants and animals found in different habitats c how animals and plants in two different habitats are suited to their environment d to use food chains to show feeding relationships in a habitat e about how nearly all food chains start with a green plant	2 Beaks & feathers 3 What's in the hedge 4 What's living in the walls Compare 2 Beaks & feathers 3 What's in the hedge 4 What's living in the walls 2 Beaks & feathers – possible follow up activity 4 What's living in the walls 4 What's living in the walls
Sc3 Materials and their properties 1 Grouping and classifying materials	a to compare everyday materials and objects on the basis of their material properties and to relate these properties to everyday uses of the materials d to describe and group rocks and soils on the basis of their characteristics, including appearance, texture and permeability	6 Building materials & methods 6 Building materials & methods

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GEOGRAPHY

Canal Quest pupil workbook

1 Geographic enquiry and skills	a ask geographical questions (for example, 'What is this landscape like?', 'What do I think about it?') b collect and record evidence c analyse evidence and draw conclusions d identify and explain different views that people, including themselves, hold about topical geographical issues	5 Canal sights, sounds & smells All pupil workbooks 7 People & canals 7 People & canals
2 In developing geographical skills, pupils should be taught;	b to use appropriate fieldwork techniques and instruments c to use atlases and globes, and maps and plans at a range of scales (for example, using contents, keys, grids) d to use secondary sources of information, including aerial photographs (for example, stories, information texts, the internet, satellite images, photographs, videos)	1 Let's make a map 1 Let's make a map 1 Let's make a map 3 What's in the hedge

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GEOGRAPHY CONTINUED

Canal Quest pupil workbook

3 Knowledge and understanding of places	a to identify and describe what places are like b the location of places and environments they study and other significant places and environments d to explain why places are like they are e to identify how and why places change and how they may change in the future f to describe and explain how and why places are similar to and different from other places in the same country and elsewhere in the world	1 Let's make a map 5 Canal sights, sounds & smells 1 Let's make a map 6 Building materials & methods 3 What's in the hedge 6 Building materials & methods 6 Building materials & methods
4 Knowledge and understanding of patterns and processes	a recognise and explain patterns made by individual physical and human features in the environment b recognise some physical and human processes and explain how these can cause changes in places and environments	1 Let's make a map 3 What's in the hedge 6 Building materials & methods
Breadth of study Themes	e an environmental issue, caused by change in an environment and attempts to manage the environment sustainably	3 What's in the hedge (Compare canal hedges with other hedges in the local area e.g. school grounds hedges, or with hedges in other parts of the UK, or abroad)

HISTORY

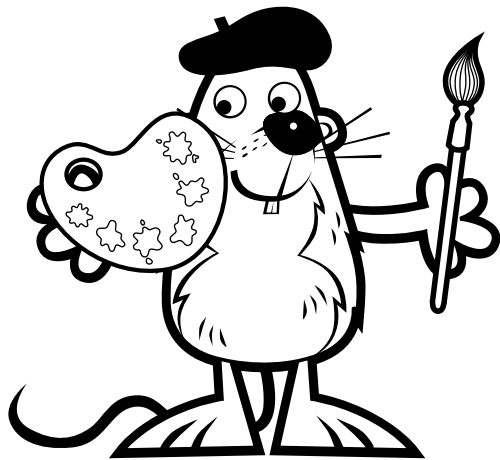
Canal Quest pupil workbook

Breadth of study 7 Local history study	A study investigating how an aspect in the local area has changed over a long period of time, or how the locality was affected by a significant national or local event or development or by the work of a significant individual	3 What's in the hedge 6 Building materials & methods
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ART & DESIGN

Canal Quest pupil workbook

1 Exploring and developing ideas	a record from experience and imagination, to select and record from first-hand observation and to explore ideas for different purposes	2 Beaks & feathers 6 Building materials & methods
4 Knowledge and understanding	a visual and tactile elements, including colour, pattern and texture, line and tone, shape, form and space, and how these elements can be combined and organised for different purposes c the roles and purposes of artists, craftspeople and designers working in different times and cultures	6 Building materials and methods 6 Building materials and methods



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Canal Quest 1:
LET'S MAKE A MAP

Please see the pupil workbook 1 and the “Let’s make a map” identification poster.

“Let’s make a map” gives children the chance to map, record and monitor a stretch of canal. It also helps develop the necessary skills of observing, recognising, measuring and recording. The activities are predominantly field based, but require follow-up and extension in the classroom.

The purpose of making a map is to chart what has been found and where everything is at the time of making the map. Maps are excellent tools for exploring how landscape features change over time.

The map provides a good basis for the more detailed investigations the children can carry out in other activities. They will gain an initial overview of the canal stretch and how various features in it relate to each other.

THE TASKS	THE RESULTS	POINTS TO NOTE
• Undertaking a simple survey of a number of given features along a stretch of canal.	• Ability to describe how to plan, organise and deliver a simple survey.	
• Observing, recognising and recording a variety of physical and human features along the canal. • Completing a prepared recording form.	• Ability to accurately recognise a variety of physical and human features. • Ability to explain the difference between human and physical features. • Ability to use a recording form accurately.	
• Making accurate measurements of distance. • Using paces to measure distance then converting paces to a fixed unit of measurement (metres) using a measuring tape.	• Ability to measure and record accurately.	
• Mapping a number of features on to a base map. • Using a base map as a means of recording.	• Ability to create a map. • Ability to transfer the position of features accurately onto a map, using symbols.	• For younger/less able pupils enlarge the map to A3. The plotting could be done by a child/adult able to draw, further to group decision.
• Dividing the stretch of canal into sections, positioning features on the base map using symbols.		



Before doing this activity it is useful if the following areas are covered:

- Introduce the purpose of Canal Quest.
- Explain what a canal is, where the local canal is and why.
- Explain the necessity of making a map of the canal as a first stage of investigation.
- Ensure that the children are aware of the concept of plans and maps as recording tools.
- Introduce the base map that you are going to use.
- Go through the recording form and familiarise the pupils with the symbols that they are going to use on the map.
- Go through the tasks that will be done on the canal.
- Practise skills – measuring distances, orientating a map.
- Ensure that participants know about the different types of land use in this activity.

SAFETY

See Safety! pages 27-34 for general guidance.

POSSIBLE FOLLOW-UP

Writing a poem

- Choose a short stretch of the canal and take up different positions along it. Some pupils stand, some crouch, facing different directions.
- Concentrate on the canal and its surroundings and ask the children to choose two words that capture the essence of the canal. Share all the words with the rest of the team. Get one of the children to make a list of them.
- As a team/class, either on site, or back in school, get the children to use these words to make up a poem about the canal.

A Sharing Circle

This exercise could be suitable for closing the field work session.

- Once the children have become familiar with their stretch of canal – ask them what impression has it made on them?

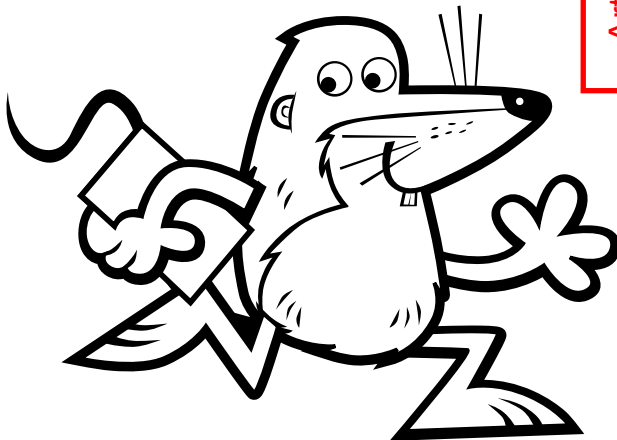
Was it a new place for them? Does that make a difference to how they look at it?
What did they like best about how the canal looks today?

Ask them to be ready to share their answers to these questions in a Sharing Circle.

Other ideas:

- Create a large wall map and/or mural of the canal stretch you are studying.
- Create a 3D model of your stretch of canal.
- Do more research on some of the special features/habitats you find.
- Map connections with local neighbourhood e.g. key routes to/along canal and access points from/to school, shops, homes, footpaths, local parks, bus stops.

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Canal Quest 2:
BEAKS & FEATHERS

Please see the pupil workbook 2 and the “Beaks & feathers” identification poster.

“Beaks & feathers” is all about observing wild birds on canals – identifying them, watching their behaviour and understanding how birds are suited to their habitat and feeding needs. They combine activities undertaken out by the canal with suggestions for possible preparation work and follow-up activities that can be done indoors.

Canal birds provide an excellent subject for improving observation skills, finding out about surveying wildlife and exploring ecological issues to do with behaviour, adaptation and terms such as “habitat”. Visitors to canals will probably spot more birds than any other animal.

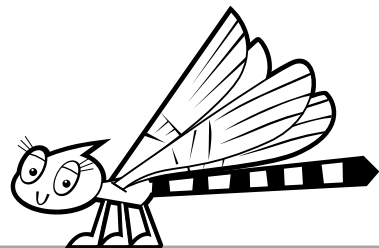
This popularity may be because they are more visible than many other wild animals. They can be easily seen on your own doorstep, whether you live in the countryside or city. As a result many people develop a familiarity and fondness for birds.

As such, canal birds provide an excellent introduction to the biodiversity – variety of wildlife – on canals.

The larger water birds such as swans, moorhens and ducks will be particularly easy for children to spot from the towpath. But the patient observer may find many other, smaller, birds amongst plants on the canal edges, on the towpaths, in hedges, gardens, trees and buildings along canals.

Knowledge about the types and numbers of birds that use our canals, where they go and what they do, is important. We can then help individual species, for example, by providing ramps for ducklings to climb out of the canal, or owl nesting boxes. The number of nesting and hiding places for birds can be increased by not cutting the grass or hedges so often, or by providing “reed rafts” where the canal banks are edged with metal or stone.





THE TASKS	THE RESULTS	POINTS TO NOTE
• Observing individual birds for their key features of identification. • Watching bird behaviour including feeding.	• Skills in field observation of birds and their behaviour. • Knowledge of how to go about identifying birds. • Ability to recognise and describe the key features and behaviour of at least five birds.	• More able/artistic pupils can be asked to make sketches of their birds or ones that can't be identified from the poster.
• Counting numbers of different bird species.	• Skills in surveying birds for biological recording purposes.	• More able pupils can be asked to make a copy of the base map to plot the location of different bird species for the report.
• Observing and recording feeding behaviour. Recognise the parts of the body and the adaptations contributing to feeding success.	• An ability to describe and give examples of birds with adaptations for feeding. • Ability to demonstrate analytical skills. • Some appreciation of wider environment of the canal and the habitats it provides for birds.	

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It will help if the following areas are covered before you go out on the canal:

- Introduce bird watching as a hobby and the need for surveying and monitoring wild bird populations.
- Introduce identification poster, worksheets, class/team organisation at the canal.
- Introduce the concept of biodiversity – the variety of life and the need to conserve it all – not just the rare or scarce species. Most people know about rare animals in other countries that are under threat. But there are many species on our doorsteps that are suffering a decline including many once common and well loved birds such as the house sparrow and song thrush. This may come as a surprise to some people who have been used to seeing them out of their house windows. Birds are probably our most visible form of canal biodiversity and are a good example to explore issues of the need to conserve wildlife. You may want to find out more about bird conservation by looking at the RSPB web site: www.rspb.org.uk. This site also has really good information and advice for teachers who have never used birds in their teaching before.
- Complete the task introducing bird identification. You may wish to go through the activities before visiting the canal – practicing birdwatching out of the classroom window, in the school grounds, or at home.

- Recap on the use of maps and grid references, as you will need to note the grid reference of the place you are studying birds.
- Go through the vocabulary used in this activity and key concepts of biodiversity, habitat, community and adaptation.

SAFETY

See Safety! pages 27-34 for general guidance.

POSSIBLE FOLLOW-UP

- Develop a wall mural, or 3D models of the birds along the canal.
- Research what birds eat for those species the pupils couldn't work out from observation – it may not be obvious from looking at some birds out on the canal.
- Develop a simple food chain including one of their birds.
- Watch the birds in the school grounds and compare the species, counts, feeding behaviour and habitats; develop a sketchbook of birds – you might like to do this before you go out on the canal.
- Develop a musical based on bird sounds, or a drama/dance based on observed behaviour.
- Write a pamphlet for the local community about the birds of the canal – what birds to look out for on the canal, where they are found and what they eat.

Canal Quest 3:
WHAT'S IN THE HEDGE

Please see the pupil workbook 3 and the “What’s in the hedge” identification poster.

“What’s in the hedge” activities provide the opportunity to practice observation skills – specifically plant identification and the recognition of signs left by a variety of animal species. Measurement, both accurate and estimates, of circumference and height respectively are introduced. They also encourage young people to consider wider issues to do with hedges – the role of hedges in the landscape, and their importance for wildlife. The activities combine work undertaken out by the canal with suggestions for possible preparation work and follow-up activities that can be done inside.

Most hedges along canals were planted around 200 years ago when canals were first built. Hawthorn was the main shrub used – because it grows quickly and its thorns help provide a good stock-proof hedge. In the years since canal

hedges were planted many other trees and shrubs have colonised, as well as a range of flowering plants under, and climbing up, the hedge. Hedges provide cover, shelter and food for many animals. Despite their importance, we know relatively little about the wildlife of our canal hedges and how it may vary from one part of the country to another. This information is vital to ensure that when we trim or lay canal hedges (which is essential to keep them stock-proof and prevent them from becoming gappy), it is undertaken in a way sympathetic to wildlife.



The best time of year for this sort of observation work is May-June, when all trees and shrubs are properly in leaf and the vegetation under the hedge has not become too overgrown.

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THE TASKS	THE RESULTS	POINTS TO NOTE
• Looking at key characteristics of trees/shrubs to identify them.	• Field observation and recognition skills. • Ability to describe and distinguish between different trees/shrubs.	
• Planning and organising hedgerow plant & animal survey. • Using trunk circumference to calculate the age of a tree. • Using height estimates of hedgerow. • Using a sampling quadrat.	• Ability to plan a simple survey. • Ability to make accurate counts. • Ability to estimate height in metres.	
• Observing and recording a variety of plants and animals present in hedgerows. • Working out a simple food chain demonstrating interdependence.	• Ability to explain what we mean by the terms: ecosystem, habitat and community, food chain and interdependence, using the hedgerow as an example.	
• Consideration of the original purpose of planting the canal hedgerow; comparing this with its present roles.	• Understanding of the reasons for planting hedgerows along canals and the possibility of their value/role changing through time.	• Possible extension to write a pamphlet on hedgerow history.
• Surveying the variety of plant and animal species along the hedgerow. • Considering the impact of cutting/ not cutting or removing the hedgerow on biodiversity and landscape. • Choosing and justifying the best type of management for the hedgerow.	• Awareness of the variety of plants and animals canal hedgerows support. • Data analysis and presentation; consideration of quality of life and equity issues – humans as part of, or separate from, their environment.	



Before doing this activity it is useful if the following areas are covered:

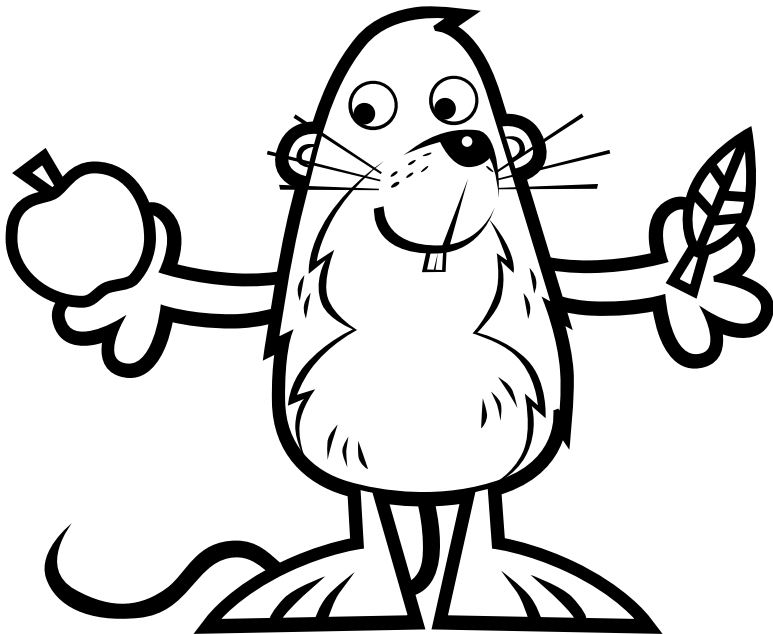
- You might like to get the participants to try out these activities on a hedgerow near your school, near where they live or along a local footpath, before you go to the canal or instead.
- Introduce the variety of living things and the need for identification and classification.
- Practice plant identification – know the difference between a leaf, flower and fruit.
- Introduce the idea of biological recording, surveys and sampling vegetation; make and practice using a quadrat.
- Introduce the idea of using animals' signs as well as sightings of animals.
- Introduce identification poster, pupil worksheets, tasks and class/team organisation at canal.
- Consider the variety of reasons for planting hedges.

SAFETY

- See Safety! pages 27-34 for general guidance.
- Insect bites – if it's hot/humid be prepared when in long vegetation.

POSSIBLE FOLLOW-UP

- Using bar charts to present the data, lead on to looking at mean, median and mode.
- Surveying the location of all stretches of hedgerow along the canal section being studied; plot them on a separate base map, with photographs of their characteristic features; use it as a display.
- Developing an historical archive on the local hedgerows – maps, photos, diaries, estate records.
- Hold a debate on whether hedgerows should be removed or kept in the countryside.
- Set up a long term monitoring recording spreadsheet on computer.



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Canal Quest 4:
WHAT'S LIVING IN THE WALL

Please see the pupil workbook 4 and the “What’s living in the wall” identification poster.

“What’s living in the wall” enables pupils to practise plant and animal identification, looking at the variety of living things and ways in which we classify them. They will look at how plant and animal communities depend on particular habitats for light, nutrients, water etc. They will also look at how different plants and animals depend on each other within a community.

Whilst activities are undertaken outside on the canal, suggestions for possible preparation work and some useful activities to do back in the classroom are provided below.

Walls and other structures along canals are homes for many different kinds of plants and animals. These activities will help us discover the variety of different plants and animals living on the walls along the canal, and which habitats they prefer. We will also explore the role that each type of plant or animal plays in wall life, and how well it is fitted/adapted for that role.

THE TASKS	THE RESULTS	POINTS TO NOTE
• Observing plants/animals living on a structure. • Identifying key features to distinguish between them.	• Ability to list and describe the key features used to separate groups of plants/animals. • Ability to handle plant/animals carefully, without damage.	• More able/artistic pupils may sketch their species, or use a photographic record of those species not identified.
• Identification of small plant and animal species observed on a structure, using plant/ animal illustrations. • (Possible follow up activity) designing a branching key to identify selected plant/animal groups.	• Animal/plant identification skills. • Ability to list 4 mini-beasts and 4 plants and describe their key features. • Understanding of the variety of living things and their classification.	• Use reference texts to find out more about identification, and the species they have identified.
• Observing the environment surrounding the plants and animals studied, and their adaptations. • Observing the relationships between associated species and their feeding habits. • Observing the places where plants/animals live – identifying key environmental factors, how they feed and what adaptations they have made.	• Knowledge of what the terms habitat and community mean and to give examples of these. • Ability to give examples of plant/ animal adaptations. • Ability to explain at least 4 key roles within a community, and an example of a plant or animal filling that role on the wall. • Ability to describe at least 3 key environmental factors relating to habitats. • Ability to describe, and give examples of, at least 3 ways plants and animals contribute to a community and how they are adapted to their habitat.	• Possible extension to write a pamphlet on the mini-beasts and plants found and their roles. • A copy of the base map can be used to plot the different locations studied, with photos of the habitats. • Develop drama/dance sketches of mini-beast/plant activity on the wall based on observations.



Before doing this activity it is useful if the following areas are covered:

- Run through the pupil workbook. Introduce identification poster. Decide who will be Botanists and Zoologists. Distribute equipment between the teams.
- Practice using the identification poster with plants and mini-beasts in the school grounds.
- Raise awareness of the word “biodiversity” – meaning the variety of life – and how this activity will involve discovering and investigating the variety of life on canal walls.
- Discuss the adaptations of plants and animals to their environment.
- Raise awareness of the need for biological recording and the role of scientists who study plants and animals.

SAFETY

- See Safety! pages 27-34 for general guidance.
- Avoid slippery areas with algae on brickwork paths.

POSSIBLE FOLLOW-UP

- Discuss the results. Are there any relationships between which species are found in which places, or on which surfaces? Do the plants and animals have adaptations that help them live in the places that they do? Are sunny or damp, high or low places favourite – why might this be?
- Make a master species list of all the plants and animals the children have found on your site.



You can explain that in future scientists will have a few clues – they won't have to start from scratch like you did!

- Did the pupils find mini-beasts and plants “unemployed”? Were they surprised? Is “moonlighting” a good idea? Did they discover any other jobs going on, not on the list? How many species have several jobs?
- What ways have plants and animals found to fit their lifestyles? Have humans copied any of these ideas? Choose an animal and/or a plant and make a list of the ‘tools’ it uses for the particular ‘tasks’ it has to do.

- What kinds of development or management on the canal would be harmful to the plant and animal community members?
- Are the activities of any of the plants and animals harmful to the well-being of the structures they live on? Do the pupils think this is a good enough reason to evict them from where they live?

Develop a branching key to help other people easily identify the plants and animals you found. The animals are easiest to start with.

- For the animals, use the key to separate slugs, snails, millipedes, woodlice, spiders, beetles and bees. The idea is to keep separating one or two groups off from the rest by using key features.
- First of all get the participants to separate their species into these animal groups.
- They can start with the mini-beasts by separating those with legs from those without. Those without can then be separated by those with shells, from those without. Then return to those with legs. Separate those with 6 legs from those with more than 6 legs. Those with 6 legs can be separated by those with hard wing cases, and those without. Those with more than 6 legs can then be separated by those with 8 legs, and those with more, and finally you can separate those with more than eight legs, by those that roll into a spiral, from those that stay flat.
- For the plants, use a branching key to separate lichens, mosses, liverworts, green algae, ferns and flowering plants. Again, each time try and separate one or two of the groups out.

For example, to start with, separate lichens out from the rest, because they are a combination of fungi and algae. All the rest are single plant groups. Next separate out the ferns and flowering plants from the rest. The former are larger plants with a well developed vascular (tube) system in their stems for carrying water and nutrients to the fronds and leaves. Separate ferns from flowering plants by feathery fronds against leaves or, spores against flowers and pollen. Return to mosses, liverworts and green algae – here the children will need to look carefully at the species they have been looking at and find features that will separate them.

Canal Quest 5: CANAL SIGHTS, SOUNDS & SMELLS

Please see the pupil workbook 5.

Note: there is no identification poster for canal sights, sounds and smells.

Landscapes are all about how people perceive the land around them. People's opinions about a landscape are affected by many things: the physical environment (e.g. geology, soils, climate, shape of the land, wildlife), social factors (e.g. settlement, how the land is used), aesthetic factors (the sounds, smells, textures, shapes) and individual perceptions (our memories, associations and preferences).

Because of all these different things, landscapes can mean very different things to different people. All landscapes are of interest and value to someone, even if they seem dull and boring to others.

Canals have a very distinctive landscape character, which is the combination of water, boats, the history of canals, and the ‘built heritage’ specific to canals e.g. canal bridges,

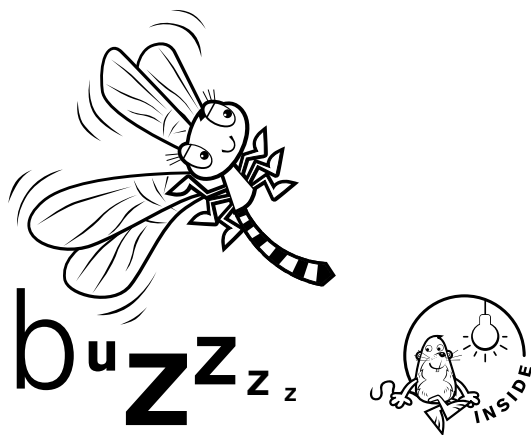
locks. Also important is the wildlife, the surrounding scenery and the people who use canals. This will also change from one part of the country to another, with different styles of building, different types of scenery and different traditions in different areas. All this points to local distinctiveness.

On top of this, people's opinions about the canal landscape will also be influenced by past experience; what they do on the canal e.g. fishing, boating, walking – even doing Canal Quest activities! It can also depend on whether the place is local to them or far from where they live, and how they are feeling at the time they visit.

In these activities pupils will investigate how sights, smells and sounds affect their opinions of the canal landscape. They will explore their own feelings about the landscape and compare it with other people's views. Pupils will also be asked to imagine what changes would improve or decrease the value of the canal landscape.

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Please contact John Butterly.





THE TASKS	THE RESULTS	POINTS TO NOTE
• Considering and understanding the impact of sounds and smells on our perception of a landscape. • Using sensory awareness activities to heighten awareness of sounds and smells. • Considering being without sight or hearing or sense of smell– what must it be like?	• Ability to describe the impact of sounds and smells on their perception of a landscape.	
• Using their senses to appreciate the landscape and describing their findings. • Identifying and expressing their own impressions/responses to the landscape.	• Ability to express their own views and perceptions through different media/terminology. • Ability to describe different ways of appreciating landscapes and comparing landscape quality.	
• Using a scale to ‘measure’ and describe relative quality of a landscape.	• Accurate recording and handling of quantitative and qualitative data and its interpretation.	
• Observing the landscape and emphasising its key elements. • Considering what makes the canal landscape locally distinctive.	• Ability to describe the key visual elements/character of a landscape. • Ability to list the elements making the local canal landscape distinctive.	
• Considering their own and listening to others’ reactions to the landscape. • Understanding factors that might mean people have different opinions about a landscape.	• Ability to listen to and process others’ perception of a landscape.	
• Considering past/present reasons for elements of the landscape being there. • Imagining future changes they might make to the landscape to improve/damage.	• Understanding of the factors that contribute to the development of landscapes. • Ability to imagine a future scenario.	

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Before doing these activities it is useful if the following areas are covered:

- Introduce the purpose of looking at landscapes.
- Go through the tasks to be carried out at the canal – decide teams.
- Consider the use of opposite scales for measuring purposes. Why use a scale of 1-5, why not 1-3 or 1-10?
- Raise awareness of the history and stories associated with the local canal.
- Raise awareness of the different structures, habitats and land uses along the canal.

SAFETY

See Safety! pages 27-34 for general guidance.

POSSIBLE FOLLOW-UP

Atmospheric Canal Alphabet

- Send your teams for a walk along their individual stretches of canal. Let them absorb the atmosphere of the area around them, where they can shut their eyes and listen and smell using closed fists to help them focus.
- After a few minutes, gather the team and have a brain storming session. Ask for single words they now associate with the canal – names of places, descriptive words of feelings, names of things etc. Write all the words down. When you get back indoors, arrange all the words by letter of the alphabet. If there are some letters with no words, see if the team can think of a different word to fit. Display your 'Atmospheric Canal Alphabet' on the wall and decorate it with drawings and photos of the things that the teams think make it 'locally distinctive'.

Pupils could also produce art work about things that they personally find attractive (or unattractive) about the canal landscape – including wider views as well as focusing in on particular objects or features. This could include serious observational drawing as well as more impressionistic pictures that may reflect feelings or atmosphere that the pupils have experienced, or illustrate some of the words in the 'atmospheric canal alphabet' exercise. For this exercise, you would need plain paper and clipboards for all those undertaking this activity on the canal.

- Ask the pupils to imagine they have a magic wand and could effect any changes to make the landscape look and work better. What changes would make it worse?
- Make a list of all the sights, sounds and smells that were noticed by the whole group – try a mathematical analysis of the number of participants noticing, hearing or smelling individual sights, sound or smells; draw bar charts and graphs.
- Repeat the “Choose the best view” activity back in your school grounds, the town/village high street, or your road/housing estate/garden. Some pupils (with accompanying adults) might like to interview other users of the towpath and ask their opinion of the canal landscape using the same set of scales.
- Create a mural of photos of the views with their score cards beside them; discuss which features raised/lowered scores.

Canal Quest 6:
BUILDING MATERIALS & METHODS

Please see the pupil workbook 6 and the “Building materials & methods” identification poster.

“Building materials & methods” explores the ‘built heritage’ of canals: from bridges to locks, from canal-side buildings to walls, to bollards, mileposts and signs. It looks at building styles and materials used, and how they change over time.

It is over 200 years since our canals were first built. Many different building materials, methods and styles have been used on canals. These have changed over time, but also differ from region to region, according to availability of materials and local traditions.

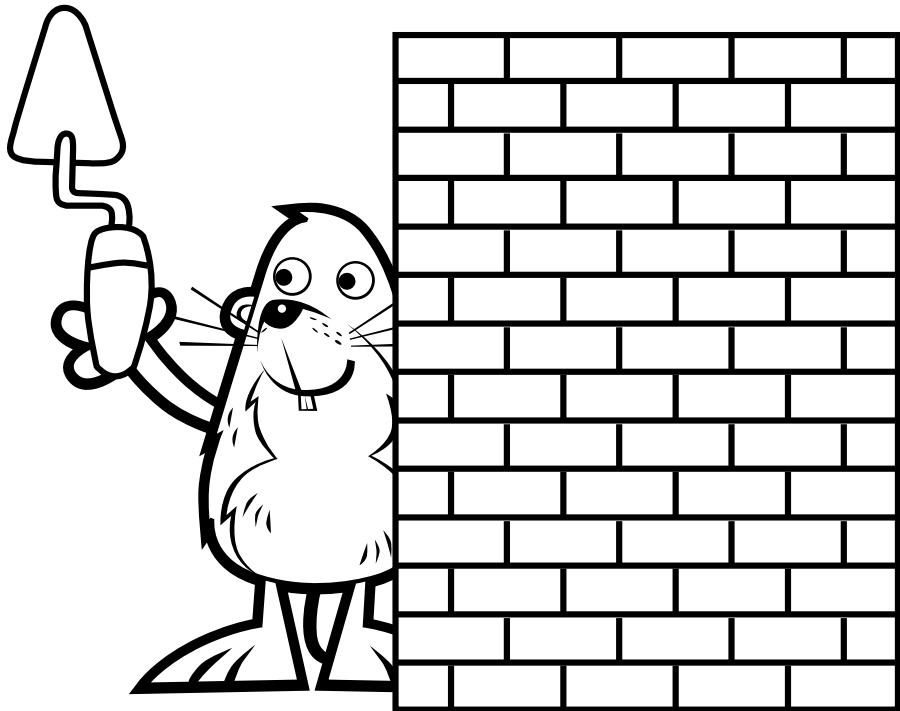


Did you know that canals in different areas have their own distinctive local character?

The identification poster enclosed with the activity gives you a detailed guide to some of the building styles used on the canals.

“Building materials & methods” combine tasks undertaken out by the canal with suggestions for possible preparation work and follow-up activities that can be done inside.

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Please contact John Butterly.



THE TASKS	THE RESULTS	POINTS TO NOTE
• Observing and identifying different building materials used along the stretch of canal. • Using secondary data sources to investigate materials and their local sources. • Finding out which materials support the most plants.	• Ability to recognise a range of different types of materials used locally. • Ability to explain why different materials have been used for the same purpose at different times. • Ability to describe which materials plants favour and why.	• Links can be made with the school buildings. • Links can be made with local sources of building materials past/present – using maps.
• Understanding the different building styles used locally and reasons behind their use.	• Ability to recognise and describe the different stonework and brickwork designs used locally. • Ability to explain why different designs have been used on different structures.	• Link to locally/nationally well known architects working in the area – if possible invite a local expert into the school or visit a local museum, etc.
• Looking at different examples of canal furniture out on the canal. • Investigating its purpose and origin, with the help of secondary sources once inside.	• Ability to give at least 3 examples of canal furniture and explain their design and purpose. • Ability to express the impact canal furniture can have on the local landscape.	
• Investigate the characteristics of a variety of materials, to explain their use in canal structures. • Use recording forms to organise data in the field. • Use maps to find locations.	• Ability to explain why a recording form is useful for organising data and use it accurately. • Ability to give and explain the use of a four-figure grid reference. • Ability to demonstrate deductive reasoning from field observations. • Ability to research from secondary sources for further information.	• Use of secondary sources at school, local library, home, IT etc.
• Experiment with design using tessellation. • Using creative photography. • Using sketches, rubbings, silhouettes. • Design/make original structures/ furniture/posters.	• Ability to use design terminology. • Ability to demonstrate practical skills in art/design/craft work – both designing and making.	



It is useful if the following areas are covered before undertaking field work:

- Recap on the history of the canal and consider other structures that were built at the same time as the canal.
- Introduce any locally/nationally well known architects involved in the building of the canal and local area, and their particular designs.
- Raise awareness of the building history of the locality and the canal.
- Consider the need for design and the aspects covered in the design process – use the school as an example.
- Be aware of the different building styles covered by the identification poster.
- Go through the worksheets

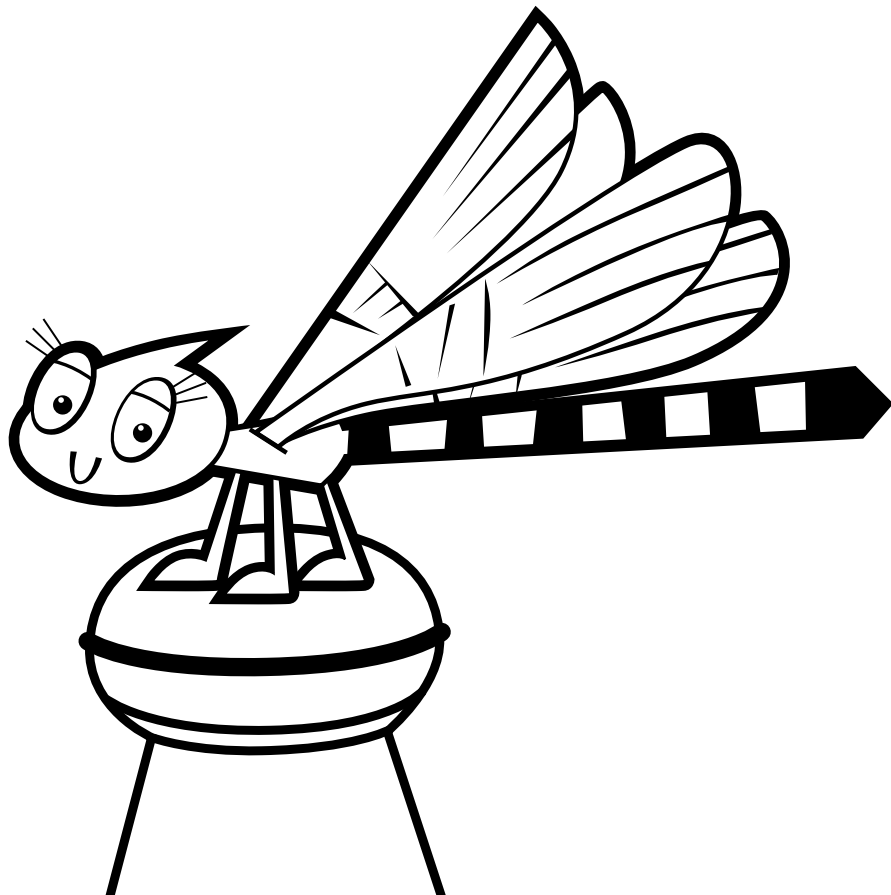
SAFETY

See Safety! pages 27-34 for general guidance.

POSSIBLE FOLLOW-UP

- Plan and complete a building materials survey of all the structures along your stretch of canal, and for the structures of your school and grounds. Is there a difference? If so, explain why. Which building materials are voted most attractive to look at? Explain why.
- Make a photographic record of the structures and the materials they are made of and design a display. Identify which materials are similar and explain where the local source is for the materials.
- Design a pattern for wrapping paper using the different patterns of stone/brick work.
- Toy bricks could be used to try out the different brick building styles.

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Canal Quest 7:
PEOPLE & CANALS

Please see the pupil workbook 7 and the “People & canals” identification poster.

Canals are used and enjoyed by a variety of people for various activities, including work and leisure. Boat-users, anglers, cyclists, walkers, people interested in wildlife, local people and tourists will all have different views on how the canal should be managed. Because of all the different needs these people have, it is difficult for British Waterways to manage the canal, and please everyone at the same time.

These activities involve finding out the type of activities being carried out on a stretch of canal and peoples’ attitudes to the canal. Participants will develop and practice surveying skills – using observation and interviewing skills. They will also find out about the different aspects of the canal which people like or dislike and will become more aware of their own dispositions.

For these activities it is best if you divide your pupils into teams. Each team in your class should do the activities at different times during your visit. Whilst one is doing this, other teams can be getting on with other activities in this pack. Or, if two teams must do these activities at the same time, they should walk in opposite directions along the towpath from a central point. Much will depend on how busy your stretch of canal is, and the time you have at your disposal.

THE TASKS	THE RESULTS	POINTS TO NOTE
• Carrying out a survey of activities taking place on/along the canal. Recording the results. • Analysing the data and interpreting findings.	• Ability to carry out a survey for a given period, make accurate record of data, analyse and interpret, draw conclusions. • Ability to list and describe the activities on the water and along the canal.	• Can extend survey to make a comparison with a survey of the school grounds.
• Carrying out an opinion survey. • Completing interviews, recording results, analysing data and interpreting findings; sharing and collating others’ findings.	• Ability to carry out an interview using a questionnaire, make accurate record of data, collate, analyse and interpret data, draw conclusions.	• Can extend survey to make a comparison with a survey of the school grounds.



Before setting out it is useful if the following areas are covered:

- Introduce the purpose of the survey.
- Introduce the recording forms, organisation of the tasks at the canal; safety code.
- Raise a general awareness of leisure activities especially those related to canals and associated vocabulary.
- Consider the ways in which people react to change, and how this is affected by values and attitudes people hold; make the pupils aware of the associated vocabulary.
- Practise interviewing skills – with other pupils.
- Look at recording skills – keeping tally counts and practise using tally gates.

SAFETY

- See Safety! pages 27-34 for general guidance.
- An adult must be present.

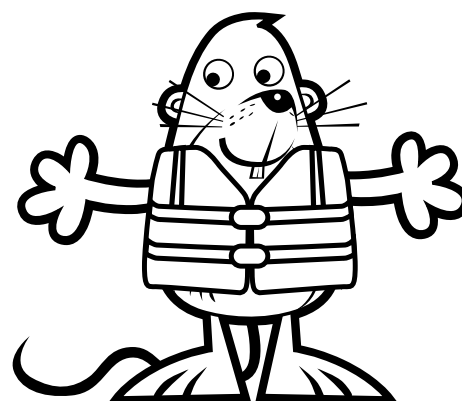
POSSIBLE FOLLOW-UP

- When you are back in the classroom you can introduce a number of ways to analyse and present the data from the answers given to each question, so that it is easier to interpret and to draw conclusions. The level of detail will depend on the age/ability of the class. Stress there are no right or wrong answers, this is all about opinions.

You can pose some or all of the following, or ask the young people what questions they should be asking – again depends on age/ability.

- Are most people aware of the name of the canal?
- How often did most people use the canal?
- What proportion of people thought the canal attractive?
- What changes were people most interested in?
- Were people concerned about the needs of wildlife as a 'user' of the canal?
- Were the pupils surprised by people's opinions, or were they similar to their own?

- Gather together the results of all the surveys.
- Make use of bar charts, graphs and spreadsheets to present data for interpretation and conclusions to be drawn.
- Create a wall display – using any photographs taken whilst you were surveying the canal, graphs of results and write-ups of your findings.
- Organise a repeat survey over a weekend/bank holiday, with adult supervision; make a comparison of any findings with those gathered during school.
- Devise a survey form to ask other people not on the canal what they think about canals e.g. families, friends and schoolmates.
- Design and complete a similar survey investigating people's preferences on another theme e.g. the pupils' favourite break time leisure activities and opinions on the environment of the school grounds.



SAFETY!

Advice for schools and groups planning visits to the waterways

Welcome to our canals and rivers! They offer exciting opportunities for field work with easy access along the towpaths. However, where there is water there can be risks. We want to help you understand the risks so that your visit is safe and rewarding. Have fun!



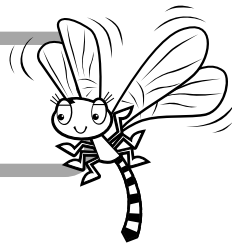
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PAGE

- 28** Planning checklist
- 30** Visit notification form
- 31** Equipment checklist
- 32** Risk assessment and Canal Safety Code
- 35** Contact details for local British Waterways offices

PLANNING CHECKLIST

Not just a day out,
but a **SAFE** day out



Seven simple steps to planning a day out by the canal

① Contact your local British Waterways office

Please contact your local British Waterways office before you visit – see section 5 for contact details. Local staff will be able to advise you on suitable locations to take your group.

This advice could include any likelihood of **a)** flooding, **b)** contaminated water or **c)** engineering works or other reasons it would be unsafe for children to visit at that time.

Action **Make contact with local British Waterways office. Photocopy the Visit Notification Form and send it in.**

② Carry out a pre-visit to the canal

Please find time for a pre-visit to the canal. This will ensure you are able to undertake a risk assessment. It also enables you to work out the logistics of moving your group safely and finding places where the whole group can stop.

Action **Make pre-visit to canal and assess specific risks.**

③ Carry out a simple risk assessment with young people and prepare your own Canal Safety Code

Follow guidance in on pages 27- 34.

Action **Do risk assessment activity and produce your own Canal Safety Code: raise young people's awareness of the risks and their responsibilities. Teach respect for water, rather than fear.**

④ Plan group logistics

We recommend that you check with your head teacher and/or your local authority on local rules for child:adult ratios.

When recruiting helpers/parents, try to arrange for people who are willing to supervise and/or lead an activity, as well as being someone the children already know.

Action **Check total number of adults required.**

⑤ Brief helpers on roles, safety and activities

Allocate clear roles to each of the helpers, making sure that everyone is briefed before the visit. You should have a qualified first-aider with you, trained to deal with the appropriate age group.

Action **Prepare clear briefing for helpers and be clear on policy for first aid actions.**

⑥ Obtain parental consent and brief parents on trip requirements

Complete normal school/group procedures for gaining parental consent. Ask parents/guardians to ensure that cuts are covered with waterproof plasters. Also, ensure young people have appropriate clothing and footwear for the weather.

Action **Complete parental consent procedures. Prepare/deliver parental briefing. Advise children to bring suitable clothing and ensure that you have some spare clothing to bring with you.**

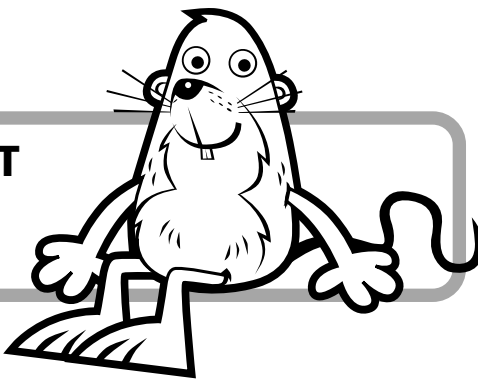
⑦ Check the weather forecast

Postpone the visit if necessary. Contact necessary people.

Action **Make decision on basis of updated forecast.**

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ENJOY YOUR VISIT



After your visit

You may like to do an after-visit exercise, once you are back inside, reviewing your Canal Safety Code and thinking about the hazards you were aware of whilst you were outside.

VISIT NOTIFICATION FORM

If you have not already done so, please let your local British Waterways office know about your planned visit – contact details are on pages 35-37.

Photocopy this page and fax or send it to your local British Waterways office.



Teacher/Group Leader's name _____

Name of your school or group _____

Address: _____

Postcode: _____

Tel. No. (day) _____

Tel. No. (eve) _____

School/
group Mobile No. _____

Fax. No. _____

E-mail: _____

We are planning to visit the _____ canal/river
at _____ (give as precise a location as possible)

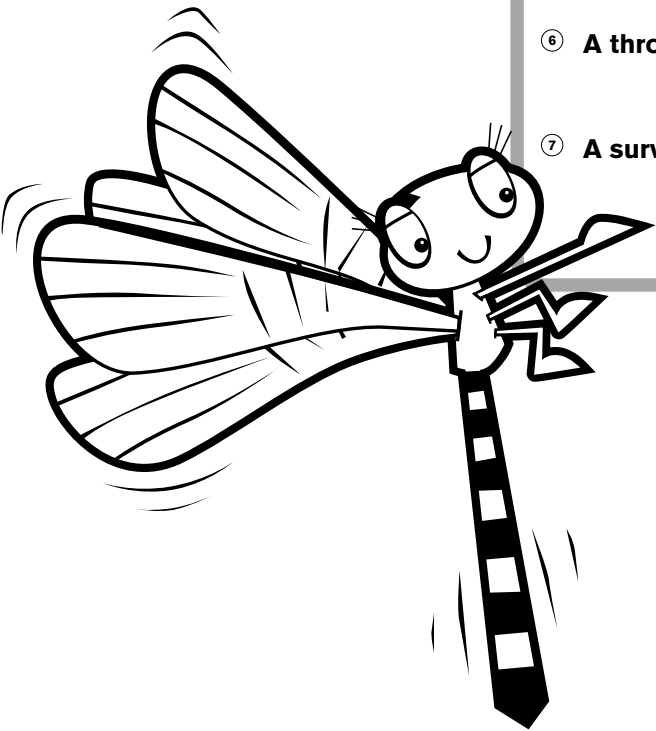
My group will comprise approximately _____
children aged between _____ and _____

The total number of adults with my group will be _____

The proposed date of the visit is _____

The best time to contact me is _____

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Please contact John Buttery.



EQUIPMENT CHECKLIST

We recommend that you take the following items in a rucksack with you for the group.

- ① **First Aid Kit** – including distilled water for washing cuts, and a supply of hypoallergenic waterproof dressings
- ② **List of young people with particular allergies, or medical conditions** – ensure helpers are fully briefed on these individuals
- ③ **Mobile phone** – please ensure that your mobile phone has coverage available where you are going!
- ④ **Phone number of local hospital, school and your local British Waterways office**
- ⑤ **Towel, blanket (to wrap wet/cold person in) and spare woolly hat**
- ⑥ **A throw line/washing line**
- ⑦ **A survival bag**

RISK ASSESSMENT & SAFETY CODE

Risk Assessment for teachers/group leaders

We strongly recommend that you visit your chosen section of canal in advance and carry out a simple risk assessment for your purposes.

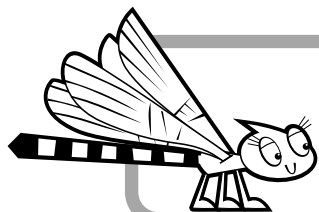
Involving young people in risk assessment

Carrying out a simple risk assessment activity with a group before the visit may also make a positive contribution to group behaviour during the visit.

Activity

Ask the class or group to devise and agree a Canal Safety Code with you.

- Discuss what are sensible and silly things to do near water.
- Brainstorm possible hazards and safety measures – then complete the risk assessment form.
- Agree on the 2 most important actions that will, if followed, make your visit to the canal safe for everybody.
- Write down the 2 actions and make them your agreed Canal Safety Code.
- Make a large version of your agreed Canal Safety Code and hang it up on the wall for everyone to see.

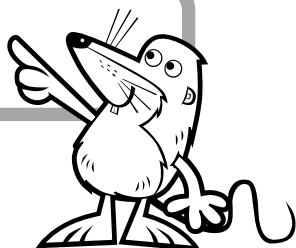


STAYING SAFE
Remind everyone that drawing up a code is not enough, you need to **FOLLOW IT!**

Please brief everyone on canalside etiquette:

- Be considerate and polite to other canal users
- Be careful not to harm plants and animals along the canal margins – never dig up plants or take away any living thing
- Take everything home that you brought with you – leave only footprints

If you see water escaping or animals in distress please contact British Waterways immediately.



GROUP/NAME: _____ DATE: _____

RISK ASSESSMENT FORM

HAZARD SAFETY MEASURES

Muddy towpath	• Wear shoes with good treads or wellies • Always walk – no running or pushing • Don't go by the edge between mud and canal

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OUR CANAL SAFETY CODE

CONTACT ADDRESSES FOR BRITISH WATERWAYS OFFICES

We agree to follow these 2 actions when we visit the canal:

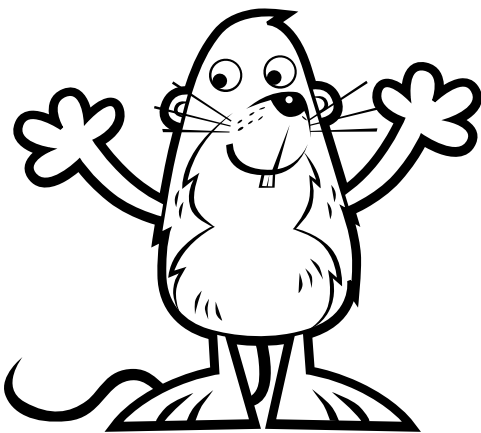
①

②

DATE:

SIGNED BY:

NAMES IN CAPITALS:



HEAD OFFICE

Customer Services
British Waterways
Willow Grange
Church Road
Watford Herts WD1 3QA

Tel 01923 201 120

E-mail enquiries.hq@britishwaterways.co.uk

Web www.britishwaterways.co.uk

SOUTHERN REGION

Regional Office

British Waterways
Brindley Suite
Willow Grange
Church Road
Watford
Hertfordshire WD17 4QA

Tel 01923 208 700

Fax 01923 234 932

Kennet & Avon Canal

British Waterways
The Locks
Bath Road
Devizes
Wiltshire SN10 1HB

Tel 01380 722 859

Fax 01380 729 076

Oxford and Grand Union Canal

British Waterways
The Stop House
Braunston
Northants NN11 7JQ

Tel 01788 890 666

Fax 01788 890 222

Grand Union Canal, South

British Waterways
Marsworth Junction
Watery Lane
Marsworth
Tring Herts HP23 4LZ

Tel 01442 825 938

Fax 01442 890 648

LONDON REGION

Regional Office

British Waterways London
The Toll House
Delamere Terrace
Little Venice
London W2 6ND

Tel 020 7286 6101

Fax 020 7286 7306

E-mail enquiries.london@britishwaterways.co.uk

Web www.britishwaterwayslondon.co.uk

Grand Union and Regent's Canals Office

British Waterways London
Norwood Top Lock
Poplar Avenue
Norwood Green
Southall
Middlesex UB2 4PN

Tel 020 8571 8900

Fax 020 8574 1220

Rivers Lee and Stort Office

British Waterways London
Enfield Lock
South Ordnance Road
Enfield
Middlesex EN3 6JG

Tel 01992 764 626

Fax 01992 788 226

London Docklands Office

British Waterways London
West India Dock Pierhead
420 Manchester Road
London E14 9ST

Tel 020 7517 5550

Fax 020 7538 5537

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NORTH WEST REGION

Regional Office

British Waterways
Navigation Road
Northwich
Cheshire CW8 1BH

Tel 01606 723 800
Fax 01606 871 471

Border Counties Waterways

British Waterways
Tower Wharf
Raymond Street
Chester CH1 4EZ

Tel 01244 390 372
Fax 01244 390 351

Leeds & Liverpool Canal

British Waterways
Finsley Gate
Burnley
Lancs BB12 6WY

Tel 01282 456 978
Fax 01942 821 434

Peak & Potteries Waterways

British Waterways
Red Bull Yard
Congleton Road South
Church Lawton
Stoke-on-Trent ST7 3AP

Tel 01782 785 703
Fax 01782 773 438

South Pennine Ring

British Waterways
Middle Warehouse
Castle Quay
Manchester M15 4NJ

Tel 0161 819 5847
Fax 0161 819 5852

Lancaster Canal

British Waterways
Main Road
Galgate
Lancaster LA2 0LQ

Tel 01524 751 888

NORTH EAST REGION

Regional Office

British Waterways
Fearn's Wharf
Neptune Street
Leeds LS9 8PB

Tel 0113 281 6800
Fax 0113 281 6886

Aire and Calder Navigation

British Waterways
Lock Lane
Castleford
West Yorks WF10 2LH

Tel 01977 554 351
Fax 01977 516 329

East Midlands Navigations

British Waterways
The Kiln
Mather Lane
Newark
Notts NG24 1FB

Tel 01636 704 481
Fax 01636 705 584

Sheffield & South Yorkshire Navigations

British Waterways
Doncaster Wharf
Greyfriars Road
Doncaster
South Yorkshire DN1 1QN

Tel 01302 340 610
Fax 01302 321 761

Grand Union Canal (North)

British Waterways
Sawley Marina
Sawley
Nottinghamshire NG10 2AE

Tel 0115 973 4278
Fax 0115 946 2129

North Yorkshire Navigations

British Waterways
Naburn Lock
Naburn
York, North Yorks YO1 4RU

Tel 01904 728 229
Fax 01904 728 860

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Please contact John Butterly.

MIDLANDS AND SOUTH WEST REGION

Regional Office

British Waterways
Peel's Wharf
Lichfield Street
Fazeley
Tamworth
Staffordshire B78 3QZ

Tel 01827 252 000
Fax 01827 288 071

Ashby Canal, Birmigham & Fazeley Canal, Coventry Canal, Trent & Mersey Canals

British Waterways
Fradley Junction
Alrewas
Burton-upon-Trent
Staffs DE13 7DN

Tel 01283 790 236
Fax 01283 791 411

Gloucester & Sharpness Canal and River Severn

British Waterways
Llanthony Warehouse
Gloucester Docks
Gloucester GL1 2EJ

Tel 01452 318 000
Fax 01452 318 076

Grand Union Canal, Stratford-upon-Avon Canal, Worcester & Birmingham Canal

British Waterways
Brome Hall Lane
Lapworth, Solihull
West Midlands B94 5RB

Tel 01564 784 634
Fax 01564 784 640

Monmouthshire & Brecon Canal, Swansea Canal, Bridgwater & Taunton Canal

British Waterways
The Wharf
Govilon
Abergavenny
Gwent NP7 9NY

Tel 01873 830 328
Fax 01873 831 788

Birmingham & Black Country Canals

British Waterways
Bayleys Lane
Tipton
West Midlands DY4 0PX

Tel 0121 506 1300
Fax 0121 506 1313

Shropshire Union Canal, Stourbridge Canal, Trent & Mersey Canal, Staffs & Worcs Canal

British Waterways
Norbury Junction
Stafford
Staffs ST20 0PN

Tel 01785 284 253
Fax 01785 284 692

SCOTLAND

Regional Office

British Waterways Scotland
Canal House
Applecross Street
Glasgow G4 9SP

Tel 0141 332 6936
Fax 0141 331 1688